MINISTRY OF EDUCATION, RESEARCH, DEVELOPMENT AND YOUTH OF THE SLOVAK REPUBLIC

VER 2026

Periodic Assessment of Research, Development, Artistic and Other Creative Activities VER 2026

Final Report of the Technical Sciences Panel

1. Overview of the Evaluation Process

This document serves as the final report for the Technical Sciences Panel regarding the Verification of Excellence in Research (VER 2026) evaluation process, conducted between October 1, 2025, and March 31, 2026. This Panel supervised the work of five sub-panels:

- Civil Engineering, Architecture, Transport
- Metallurgy, Mining and Materials Science
- Mechanical Engineering
- Electrical Engineering
- Computer and Information Sciences.

Over the course of the evaluation period, the sub-panels successfully assessed a total of 40 applications, encompassing 979 research outputs, 63 social impact case studies, and 40 creative environment forms.

2. Confirmation of Methodological Consistency and Fairness

The Technical Sciences Panel confirms that the evaluation procedure was carried out properly, transparently, and in strict accordance with Directive No. 03/2025. The Panel expresses its highest satisfaction with the work of all five sub-panels.

- Uniformity of Criteria: We ensured the application of a uniform methodology and assessment criteria across all five sub-panels. The evaluation of research outputs (based on originality, significance, and rigor), social impacts, and creative environments was conducted fairly and homogeneously.

- Active Participation and Quorum: Sub-panel members demonstrated high professional commitment. Every submitted output was peer-reviewed by at least two independent evaluators. Furthermore, at least one, normally two, Panel member(s) attended every sub-panel meeting, ensuring that all quorum and procedural requirements were consistently met without any major issues. In addition, the panel members individually checked the output to see that different panel gradings are in line with each other.

- Compliance and Ethics: Strict adherence to ethical guidelines was maintained. All identified conflicts of interest (such as specific institutional conflicts in the Metallurgy and Mechanical Engineering sub-panels) were properly managed, and the affected evaluators were completely excluded from assessing relevant applications.

- System and Data Management: Interdisciplinary outputs were successfully verified and assigned, and co-authored outputs were monitored to prevent duplicate evaluations.

3. Sub-Panel Specific Observations

- Civil Engineering, Architecture, Transport. The evaluation proceeded steadily and strictly on schedule. The sub-panel efficiently managed the review of 7 assigned applications and 175 outputs, coordinating their meetings effectively (including early

morning sessions) without requiring any issue escalations to the main Panel. The evaluators of the sub-panel demonstrated exceptional dedication and professionalism in the accomplishment of their evaluation of architectural outputs.

- Metallurgy, Mining and Materials Science. The evaluation process was straightforward, highly professional, and strictly compliant with the assessment guidelines. The sub-panel took an active role early in the process, efficiently managing the thorough review of their 3 assigned applications and 74 research outputs. The evaluators demonstrated exceptional dedication and expertise, sharing valuable evaluation ideas and practices during their meetings. They maintained high standards of review throughout the entire period and successfully completed all system submissions in a timely and coordinated manner.

- Mechanical Engineering. The evaluation in Mechanical Engineering proceeded very smoothly, with the sub-panel effectively completing its system submissions without any operational delays. As noted during the February Panel meeting, no problems or operational hurdles were encountered throughout their entire assessment. Additionally, a documented conflict of interest regarding the University of Agriculture in Nitra was successfully navigated.

- Electrical Engineering. The sub-panel took an active role on day one to evaluate their 6 applications in the utmost professional manner. All members were professionals in this field and shared evaluation ideas and practices in the early stages of the process. The finalization of the results took some time at the end. However, they maintained high standards and successfully completed all system submissions in a timely manner.

- Computer and Information Sciences. After the initial start of the process in Computer and Information Sciences, the experts worked at quite different paces and monitoring the progress was based on sporadic outputs. However, towards the end of the evaluation, all reviewers aligned their evaluations, being one of the first to finalize their output assessments and system submissions. At the end, it could be observed that all members followed high standards, especially considering the largest subpanel handling the largest workload in the Technical Sciences domain, encompassing 15 applications and 365 research outputs.

4. Overall Quality of Research and Creative Activities

The VER 2026 assessment of the Technical Sciences domain encompassed a comprehensive review of 40 applications, which included 979 research outputs, 63 social impact case studies, and 40 creative environment forms. Across the five sub-panels, the research outputs were rigorously evaluated based on their originality, significance, and rigor.

Overall, the assessment revealed a robust standard of research within the domain.

- Robust Research Output. The domain demonstrated a high level of rigor and significance in its submitted research outputs, accurately reflecting a strong engineering and technical sciences landscape in Slovakia.

- Strong Social Impact Potential. When properly articulated, the technical sciences domain showcased excellent application potential in its underpinning research, translating academic work into tangible social, environmental and economic impacts.

However, the Panel also observed some disparities in the quality of the submitted materials.

- Disparities in Institutional Preparation. The quality of the creative environment forms and social impact narratives depended heavily on the institutional approach to the application process. Universities that established dedicated committees and a clear strategy submitted highly comprehensive, well-evidenced, and high-quality applications. Conversely, institutions that delegated this massive task to only one or two individuals produced less detailed applications, thereby negatively affecting their ability to demonstrate their true quality.

- Assessment of Interdisciplinarity. The Panel noted a significant trend regarding interdisciplinary research. Many applicants inappropriately flagged their outputs as interdisciplinary under the mistaken assumption that this classification would automatically yield a better score. Because the evaluation guidelines strictly required an interdisciplinary output to demonstrate a tangible contribution to each assigned field, outputs that failed this rigorous check were heavily penalized, frequently classified as the lowest quality level.

5. Recommendations for Future Evaluations (VER 2030+)

While the VER 2026 process was successful, the Panel identified a few systemic issues regarding how applicant institutions approached the evaluation. As preparations begin for the next assessment cycle in 2031, we respectfully submit the following recommendations.

- Refining and Enforcing Rules for Interdisciplinary Outputs. A major issue identified during the assessment was the widespread misuse of the "interdisciplinary" classification by applicants. Many applicants mistakenly assumed that marking an output as interdisciplinary would automatically achieve a more favourable evaluation. However, the Panel strictly applied the rule that an output must demonstrate a tangible contribution to every assigned field. Consequently, outputs

failing this strict check were heavily penalized, often receiving a "5" (*Below the standard of nationally recognised work*). For the next evaluation, we strongly recommend implementing clearer warnings in the application guidelines or a pre-validation step in the IT system so applicants fully understand the strict criteria and severe penalties for mistakenly claiming interdisciplinarity.

- Guidance on Institutional Preparation and Resource Allocation. The Panel observed a stark disparity in the quality of applications based on how institutions internally managed the process. Universities that established dedicated committees and strategic approaches submitted high-quality, comprehensive applications. In contrast, institutions that delegated this massive task to just one or two individuals submitted low-quality applications. Given the significant amount of performance-based funding tied to these results, we recommend that the Ministry strongly advise all universities to form dedicated internal committees for VER application preparation.

- Output evaluations: It is positive to see collaboration between institutes, specifically when there is international collaboration with recognized institutes and universities. However, in the case of outputs, authorships across multiple organizations can sometimes raise questions about the contributions of different institutes. We'd recommend that, in these cases, the submission system include an additional field to describe the contributions of each submitting institute.

6. Conclusions

We confirm that the Verification of Excellence in Research (VER 2026) for the Technical Sciences Panel was completed rigorously, impartially, and in full compliance with all

regulations. We thank the Ministry for their support, particularly Dr. Tomáš Žipaj for his continuous guidance, and the sub-panel members for their dedication.

Panel members

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